

22869

S/077/61/006/003/003/003

D045/D112

The effect of germanium sol on the light

and another - after exposure. Analyses showed that the treated emulsion layer contained an average of $1.6 \cdot 10^{-6}$ g/cm² of germanium. Exposure was conducted by the diffused light of an electric lamp under constant conditions. On each plate 6 bands subjected to illumination for different periods were obtained: 0, 10, 20, 30, 60 and 120 sec. The following sequence and conditions of treatment were chosen: a) soaking of the emulsion layer in distilled water - 5 min; b) treatment by the germanium hydro-sol by immersing half the plate in the mortar (the other half served as a control plate) - 10 min; c) rinsing in water - 10 sec; d) drying in the air in darkness (if treated with the sol before exposure) or developing (if treated by the sol after exposure); e) developing for 4 min in a metolhydroquinone developer. After developing, the plates were measured by an MDP-4 (MF-4) photometer, and the coefficient of transparency K_{tr} of the exposed parts in relation to the non-exposed part of the control half of the plate was determined. In Fig. 1 the curves of the change in the coefficient of transparency K_{tr} depending on the illumination period are presented. The curve α is drawn according to the results of photomeasuring of the control part of the plate. It can be seen that K_{tr} for the half of the film treated with germanium is considerably reduced in the region of large and average exposures, whereas in the region of zero exposure it

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does not change. Fig.2 shows a set of curves of change of the relative coefficient of transparency of the control half of the plate and the half treated by germanium, $K_{rel} = K_{trans, contr} / K_{trans, treated}$ depending on the time of development. The shape of the curves change with an increase in exposure. The sharp rise of all the curves on the left part of the graph is an indication of the catalytic effect of germanium, which accelerates developing. Control experiments, in which the germanium sol was replaced by distilled water, showed that this form of treatment had very little effect. The curve 1 indicates the increase in fog density during a somewhat longer developing period (5-6 min) and the sharp rise of the curves 2 and 3 in this field indicates the total effect of precipitating silver and particles of germanium as far as completeness of development is concerned. The curve 2, corresponding to an illumination period of 2 min, clearly reaches a maximum, which indicates practically complete reduction of silver. The horizontal parts of the curves 1 and 2 show the discontinuation of the catalytic effect which is indigenous to the initial stages of developing, since for the given exposures and the developing period, the relationship of the coefficients of transparency for the control and investigated plates does not depend on the time of developing. The effect of a germanium sol in these cases is equivalent.

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lent to the effect produced by increasing the light sensitivity of a photographic emulsion. In Fig.3 are shown the curves of equal blackening, corresponding to the optical density $D=1$ and indicating the reduction in the required exposure upon treatment with germanium, depending on the time of developing. From Fig.3 it can be seen that upon treatment with a germanium sol after illumination the sensitivity of the plates increases by 2.3-2.5 times and that when germanium is introduced before exposure Δt is increased by only 1.2-1.5 times (during an identical developing period of 2-5 min). This may be explained by the change in the properties of the particles of germanium upon desiccation of the emulsion layer. However, storage of the dried-out plates for 5-10 days did not have any noticeable effect on this phenomenon. In this connection, it is evident that the observed effect was not produced by hypersensitization by water (Ref.2: K. B. Neblit, "Fotografiya, yeye materialy i protsessy [Photography, its materials and processes], Gos. izd. "Iskusstvo", M., 1958, str. 194) especially when it is considered that, according to the data of the control experiments, the soaking of the emulsion layer in water, as well as exposure by non-actinic light, do not affect the results of the experiment. The effect of increasing the light sensitivity was noticed also when using silicon and chrome sols, but on a considerably smaller

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D045/D112

The effect of germanium sol on the light

scale than with germanium. The high-resistance and low-resistance Π (P) -type germanium appeared equally active; germanium with a P-type conductivity was a little less active. On this basis, an assumption can be made as to the presence of a contact reaction, on the border of the silver bromide section and the particles of germanium, which leads to the intensification of the developing process. There are 3 figures and 2 Soviet references.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoj promyshlennosti (State Design and Planning Scientific Research Institute of the Rare Metals Industry)

SUBMITTED: July 16, 1960.

Card 5/7

1.1404-65 EWT(1)/SPA(s)-2/EST(m)/LAP(1)/LPAE) PT-10/PL-1 IUP(s)/
 AS(m)-2/ASD(s)-5/APMD(t)/ESD(m) JD S/0181/64/006/009/2852/2853
 ACCESSION NR: AP4044964

AUTHOR: Abagyan, S. A.; Lishina, A. V.; Surishev, V. K.

TITLE: Minima of conduction bands of crystals of the GaAs-GaP
 system

SOURCE: Fizika tverdogo tela, v. 6, no. 9, 1964, 2852-2853

TOPIC TAGS: gallium arsenide phosphide, conduction band, crystal
 lattice parameter, crystal composition, absorption band

ABSTRACT: To reconcile some discrepancies in the published data,
 the authors investigated the minima of the conduction band, using
 crystals grown from the gaseous phase. The crystal composition was
 determined by x-ray measurements of the lattice parameter directly
 on the investigated sample, assuming the lattice parameter to be
 a linear function of the composition. The procedures used to con-
 trol the crystal quality, the change in the absorption, and to de-

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L 14045-65

ACCESSION NR: AP4044964

termine the energy position of the minimum are the same as described by two of the authors earlier (S. A. Abagyan, V. K. Subashiyev, DAN SSSR, v. 156, 763, 1964). The results, based on the investigation of the intrinsic absorption edge of the crystals, show that the minimum of the conduction band in GaAs as well as the minima in crystals of composition $\text{GaAs}_{1-x}\text{P}_x$ differ from the published values. The data have also shown the presence of a minimum at 1.48 eV corresponding to indirect transitions which is assumed to be at the points (111) and which is capable of explaining the slight increase in the effective mass near the (000) minimum. It is also concluded from the data that in n-type crystals of mixed composition, in which the minima are sufficiently close to one another, should display effects connected with repopulation of electrons from one minimum to another. This may result from shifts of the minima relative to each other with changes in pressure or with changes in temperature. "The authors thank T. M. Antonova for help with the measurements and in the reduction of the experimental data." Orig. art. has 1 figure.

Card 2/4

L 11045-65
ACCESSION NR: AP4044964

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute
of Semiconductors, AN SSSR)

SUBMITTED: 11Apr64

ENCL: 01

SUB CODE: 01, SS

NO REF NOV: 001

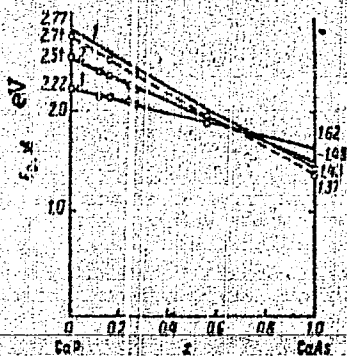
OTHER: 009

Card 3/4

1. 14045-65

ACCESSION NR: AP4044964

ENCLOSURE: 01



Energy position of minima of conduction band in the GaAs_x^{1-x} system as a function of the molar composition.

$T = 290^\circ\text{K}$, 1 - (000), 2 - (111), 3 - (100)

Card 4/4

ACCESSION NR: AP4039410

S/0070/64/009/003/0436/0439

AUTHORS: Lishina, A. V.; Medvedev, S. A.; Nashel'skiy, A. Ya.; Sakharov, B. A.

TITLE: Morphology of gallium phosphide crystals grown from the gas phase

SOURCE: Kristallografiya, v. 9, no. 3, 1964, 436-439

TOPIC TAGS: crystal growth, twinned crystal, gallium phosphide

ABSTRACT: The crystals were obtained in a stream of inert gas by a method modified from that proposed by M. Gerchenszon and R. M. Mikulyak (J. Electrochem. Soc., 108, 6, 548-51, 1961). The procedure yielded transparent yellow-orange crystals of two principal forms: acicular and ribbon shaped. The acicular crystals formed three-sided prisms with equilateral triangular cross sections. Occasional hexagonal cross sections were observed. The direction of growth was the $\langle 111 \rangle$ axis. The tops of the crystals were generally bounded by octahedral faces $\{111\}$; the sides were bounded by the $\{110\}$ form. Crystals with triangular cross section showed what appeared to be twinning on the (110) plane, but crystals with hexagonal cross sections did not show this. The tabular ribbon crystals grew in the $\langle 112 \rangle$ direction. The basal plane was (111) . The $\{111\}$ and $\{100\}$ forms were dominant. Twins occurred on at least two composition planes, one type of twin being very

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ACCESSION NR: AP4039410

distinct in thin sections cut perpendicular to [112]. Orig. art. has: 5 figures.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut
redkometallicheskoj promyshlennosti (State Scientific Research and Planning
Institute for the Rare Metal Industry)

SUBMITTED: 18Aug63

SUB CODE: SS

NO REF SOV: 001

ENCL: 00

OTHER: 008

Card 2/2

L 17940-45 EWT(m)/ENP(t)/ENP(b) LJP(c)/AFWL/SSD/ESD(g) JD
 S/0032/04/030/011/1362/1363
 ACCESSION NR: AP4048566

AUTHORS: Maslov, V. N.; Lishina, A. V.

TITLE: Local electrolytic polishing and etching of germanium

SOURCE: Zavodskaya laboratoriya, v. 30, no. 11, 1964, 1362-1363

TOPIC TAGS: germanium, germanium surface, metal polishing, electrolytic etching, metal etching/ M13 11 microscope

ABSTRACT - Electrolytic polishing and etching using capillaries of various diameters to polish areas of 0.1-3.0 mm on p- and n-type germanium samples were investigated. To determine the electropolishing current during various stages of the process, the relief of the etched hole was observed under a microscope (type M13-11). In p-type germanium the depth of the holes increased from 2-3 to 78-80 micron during a time interval from 5-40 seconds. Flat-bottomed holes form after 10-12 seconds. The yield (at 180-v cell voltage) increases from 58 to 98% during the process with an average current of 5-6 amp/cm². Best results were obtained by electropolishing p-type germanium in 10-20% NaOH solution for 10-20 seconds and electro-etching in 1% citric acid solution for 1-3 minutes. Best results with n-type germanium were obtained by simultaneous polishing and etching in a 4% solution of trilon B with 2%

Card 1/2

L 17940-65

ACCESSION NR: AP4048366

NaOH for one minute. The triangle-shaped indentations in the etched holes correspond to exit points of dislocations. Orig. art. has: 2 figures. 2

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoey promyshlennost' (State Scientific Research and Design Institute of the Rare Metal Industry)

SUBMITTED: 00

ENCL: 00

SUB CODE: M4

NO REF SOV: 000

OTHER: 002

Card 2/2

L 10235-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(h)/EWA(c) IIP(c) JD/GI

ACC NR: AP6001232

SOURCE CODE: UR/0363/65/001/012/2154/2157

AUTHOR: D'yakonov, L. I.; Lishina, A. V.; Maslov, V. N.; Nashel'skiy, A. Ya.;
Sakharov, B. A. 44.55 44.55 44.55 44.55 68
B

ORG: Giredmet 44.55

TITLE: Epitaxial growing of single crystals of gallium phosphide-gallium arsenide
solid solutions 4 44.55 47 27SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965,
2154-2157TOPIC TAGS: single crystal, single crystal growth, epitaxial growing, chemical
transport reaction, gallium arsenide, gallium phosphide, quasibinary solid solution,
semiconductor single crystal 21 44.55

ABSTRACT: Single crystal epitaxial layers of $\text{GaP}_x\text{As}_{1-x}$ solid solutions have been deposited on GaAs single crystal wafers of a given crystallographic orientation by a chemical-transport reaction in a close-spaced system (sandwich method). The purpose of the work was to grow $\text{GaP}_x\text{As}_{1-x}$ layers thick enough to be used separately from the substrate in various semiconductor devices of the most advanced type. References to Western sources suggested the use of $\text{GaP}_x\text{As}_{1-x}$ solid solutions in laser diodes, luminescent diodes with noncoherent emission characteristics, and in light modulating devices. Earlier, the sandwich method was successfully applied by Soviet scientists

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UDC: 546.681.181.1+546.681.191
2

L 10235-66

ACC NR: AP6001232

to deposition of thick GaP epitaxial layers [N. P. Sazhin, V. N. Maslov. DAN SSSR, 160, 171 (1965)]. The close-spaced system used in the present study was similar to that described by F. H. Nicoll [J. Electrochem. Soc., 110, 1165 (1963)]. The source material was a ground mixture of GaAs and GaP crystals, which was placed in a cavity on the surface of the lower graphite block. Water vapor carried by a stream of hydrogen was the transporting medium. The substrate was heated in a vertical resistance furnace to a maximum of 880C; the temperature gradient between the source and the substrate blocks was 10—20C. The growth rate was 7—15 μ /hr. Under the above conditions, the single crystal epitaxial $\text{GaP}_x\text{As}_{1-x}$ mirror-like layers, up to 700 μ thick and to 3 cm^2 in area, were prepared on (111)B GaAs substrate. Composition of the layers was dependent on the composition of the charge. Transport of components between the source and the substrate was accomplished in the 1:1 ratio, if the substrate was maintained at 872—875C. Therefore, a given ratio of the components could be obtained over the entire composition range of $\text{GaP}_x\text{As}_{1-x}$ solid solutions ($x = 0-1$). The problem was discussed of the application of this theoretically anomalous, transport of components to other semiconductor quasibinary systems. Orig. art. has: 1 figure. [JK]

SUB CODE: 20 SUBM DATE: 07Jun65/ ORIG REF: 003/ OTH REF: 017/ ATD PRESS:

4163

Card 2/2

Ship 159
L 31154-66 EWT(m)/T/EWP(t)/EWP(b) IJP(c) JD/JG

ACC NR: AT6002256

SOURCE CODE: UR/2564/65/006/000/0239/0243

AUTHOR: Lishina, A.V.; Medvedev, S.A.

ORG: none

TITLE: Metallographic study of gallium phosphide crystals grown from the gas phase
[Paper presented at the Third Conference on Crystal Growing held in Moscow from 18 to 25 November, 1963]

SOURCE: AN SSSR. Institut kristallografi. Rost kristallov, v. 6, 1965, 239-243

TOPIC TAGS: gallium compound, phosphide, etched crystal, crystal dislocation, twinning

ABSTRACT: The action of various etchants (acid and oxidizing mixtures) on gallium phosphide single crystals was investigated. The etchants were also used to study the faceting of the crystals and to establish a relationship between the degree of their perfection and the growth conditions. Analysis of the shape of the etch pits on various faces showed that acicular and ribbonlike crystals were faceted with planes (111), {110}, and {100}. Etch pits on ribbonlike crystals are often grouped in a row similar to the distribution of dislocations on the surface of germanium dendrites. The

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E 31154-66

ACC NR: AT6002256

ribbonlike crystals, like dendrites, are polysynthetic twins with twinning planes parallel to the $\{111\}$ faces of the crystals. A complete development of the twinned structure of gallium phosphide crystals was found to require the combined use of bromine and acid etchants. Metallographic and x-ray analyses of the acicular crystals showed that they had a single-crystal structure. Orig. art. has: 7 figures and 1 table.

SUB CODE: 20 / SUBM DATE: 00 / ORIG REF: 001 / OTH REF: 006

Card 2/2 *LC*

APPROVED FOR RELEASE: 06/20/2000

APPROVED FOR RELEASE: 06/20/2000

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APPROVED FOR RELEASE: 06/20/2000

APPROVED FOR RELEASE: 06/20/2000

L 23082-65

ACCESSION NR: AP5003436

S/0181/65/007/001/0200/0206

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of
Semiconductors, AN SSSR)

ADMITTED: 12Jul64

ENCL: 00

SUB CODE: SS

NO REF SCV: 002

OTHER: 008

ATD PRESS: 3173

AUTHOR: Basov, N. G.; Yeliseyev, P. G.; Nikitin, I. V.; Mianina, A. V.; Maslov,
N. V.; Neshel'skiy, A. Ya.

TITLE: A semiconductor $\text{GaAs}_{1-x}\text{P}_x$ junction laser 26

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1902-1904

TOPIC TAGS: laser, semiconductor laser, junction laser, injection laser, emission, gallium arsenide, GaAs, P, x

$\text{GaAs}_{1-x}\text{P}_x$ junction laser

emission spectrum of laser

Card 1/2

L 57545-65

REF: AP501611

Plachaskiy institut im. P. A. Lebedeva AN SSSR

SUBMITTED: 28Jan65

ENCL: 00

SUB CODE: 00

NO REF SOV: 001

OTHER: 004

ATD PRESS: 4037

Card

272

L 15941-66 EWP(m)/T/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AT6002270

(A)

SOURCE CODE: UR/2564/65/006/000/0350/0354

AUTHOR: Davydov, A.A.; Demenev, N.M.; Lishina, L.V.; Maslov, V.N.

ORG: none

TITLE: Study of the crystallization of a germanium melt between flat plates.
(Paper presented at the Third Conference on Crystal Growing held in Moscow from 18 to 25 November, 1963.)

SOURCE: AN SSSR. Institut kristallografi. Roet kristallov, v. 6, 1965, 350-354

TOPIC TAGS: crystallization, germanium, silicon alloy, germanium alloy, germanium single crystal

ABSTRACT: The aim of the study was to determine the factors affecting the formation of germanium single crystals, the perfection of their structure, and the crystallographic orientation during crystallization of drops of melt between flat crystallization plates made of various materials. When quartz and then graphite plates were used, the instant of crystallization of supercooled drops of the germanium melt could be observed by the glow emitted as a result of the latent heat of crystallization. The yield of single crystals was affected by the following factors: plate material, furnace atmosphere, temperature

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L 15941-66

ACC NR: AT6002270

conditions of melting, and degree of alloying of the melt. All the polycrystalline samples obtained are divided into three groups: polysynthetic twins, polycrystals with many nuclei, and a combination of these two, i.e., a mixed type of polycrystals. The crystallographic orientation was determined by x-ray and microoptical methods, and the dislocation density was measured. Crystallization between flat plates was also used to prepare a germanium-silicon alloy containing 5 at. % Si, which was shown to be homogeneous. This is explained by crystallization conditions involving a high linear rate, which minimizes the segregation of silicon. Orig. art. has: 6 figures.

SUB CODE: 20 / SUBM DATE: none / OTH REF: 003

FW
Card 2/2

LISHKA, Iosif, MUDr, Bratislava, ul. Cs. armady 17

Treatment of cancer of the skin with podophyllin. Cesk.onkol. 3
no.1:61-69 1956.

1. Issledovatel'skii onkolgicheskii inst. v Bratislave
(SKIN NEOPLASMS, ther.
podophyllin (Rus))
(PODOPHYLLIN, ther. use
cancer of skin (Rus))

LISHKAREV, M.

V. Sotnikova, and M. Lishkarev - "Influence of surface-active compounds on the process of cathodic deposition of cadmium." (p. 755)

SO: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1950, Vol. 20, No. 5.

LISHKE, A. A.: Master Med Sci (diss) -- "Surgical treatment of suppurative wounds of the fingers and wrist by wound suture and local administration of penicillin". Perm', 1958. 24 pp (Perm' State Med Inst), 150 copies (KL, No 13, 1959, 112)

LISHKE, A.A.

~~Impermeable suture~~ in the surgical treatment of inflammatory &
suppurative. Eksp. khir. 3 no.2:54-56 Mr-An '58. (MIRA 11:4)

1. Iz kliniki obshchey khirurgii (zav. N.M.Stepanov) Permskogo
meditsinskogo instituta.

(PARONYCHIA, surg.

closed sutures (Rus)

(WRIST, dis.

phlegmon, surg., closed sutures (Rus)

EXCERPTA MEDICA Sec 9 Vol 13/4 Surgery Apr 59

1767. (566) SURGICAL TREATMENT OF PANARITIUM WITH REMOVAL OF NECROTIC TISSUES AND COMPLETE CLOSURE OF THE WOUND -
Lishke A. A. - KHIRURGIYA 1958, 4 (80-82)

In 500 patients with various forms of panaritium and phlegmon of the hand the wounds were completely closed after removal of the necrotic focus and local application of penicillin. Healing by first intention was attained in 84.8% of cases. Examination of the exudate carried out during the operation in 152 patients revealed the prevalence of staphylococcus in 94.7%. Repeated examination of exudate from the wounds of 50 patients demonstrated that the presence of pathogenic micro-organisms does not hinder the healing of the wound. On the other hand in certain cases the wound separated in absence of microbic growth. It is concluded that the fundamental condition for successful healing of the wound after suturing it is the thorough removal of necrotic substrate.

LISHKI, A.A.

Acute distension and rupture of the stomach due to carbon dioxide;
abstract. Khirurgiia 34 no.12:99 D '58. (MIRA 12:1)

1. Iz khirurgicheskogo otdeleniya bol'nitsy mediko-sanitarnoy chasti
No.7 Permi,
(STOMACH--RUPTURE)

LISHKE, A.A., kand.med.nauk

Experience with radical surgery in pulmonary tuberculosis. Sov. med.
28 no.3:127-130 Mr '65. (MIRA 18:10)

1. Gosptal'naya khirurgicheskaya klinika Nr. 2 (zav. - dotsent
D.I.Yegorov) Permskogo meditsinskogo instituta.

15

Catalase in barleys of different origin. N. N. IVANOV AND M. I. LISHKEVICH.
Bull. Applied Botany, Genetics, Plant Breeding (Leningrad) 21, No. 4, 8-12 (in English),
33-40 (1929).—A higher catalase content was found in the northern barley than in the
southern, but barley studied at a mountainous southern station resembled the nothern
varieties. Amylase activity is also greater when catalase is greater. The enzyme con-
tent can serve as a maturity index of the grain. Lewis W. Burr

Composition of the tar from Birch trees. V. K. TISHCHENKO, M. L. LUKASHEVICH AND L. A. SEULSKAYA. *Zhur. Prikladnoi Khim.* 3, 373-400 (1950). — The tar is a thick, almost black liquid with a penetrating acidic odor. In thin layers it has a red brown color. The following constants were determined: b. 130°, d. 1.24, moisture content (drying on a water bath to const. wt.) 25.53%, ash 0.12%. On distn. 27.5% distills off at 130-230°, the residue forming a brittle mass. Forty % of the tar can be extrd. by boiling with H₂O. It is completely sol. in EtOH and in a 10% NaOH soln., but only partially sol. in H₂O. HNO₃ easily oxidizes the tar with formation of a clear, dark colored soln. which decolorizes to a certain extent on standing. Conc'd. HCl and H₂SO₄ also dissolve the tar. Its soln. in H₂SO₄ thickens on standing. The analysis of the tar showed the presence of HCOOH, AcOH, angelic acid, dimethoxypyrogallol, dimethoxymethylpyrogallol, and other substances which were not investigated in detail. Hexamethoxypyrallol (C. A. 6, 2406), was also present. The tar can be utilized in the manuf. of rubber, or compds. can be isolated from it that are useful in photography or in pharmacy.

V. KALCHURSKY

1ST AND 2ND COLUMNS																										3RD AND 4TH COLUMNS																									
SUBJECTS AND PROPERTIES INDEX																										SUBJECTS AND PROPERTIES INDEX																									
<p><i>Estimation of the quality of seeds by their enzyme content. M. I. LOMKINOVICH.</i> <i>Bull. Applied Botany, Genetics and Plant Breeding (Leningrad) 25, 103-104 (1931)</i> <i>(Russian); 127-33 in English; cf. C. A. 25, 833.</i> — The activities of catalase, amylase, and protease in grains of barley and wheat were detd. The more completely the grains are ripened the lower is the activity. On this account a high activity of catalase and amylase was found in the grains of plants which, because grown in higher latitudes, never reached full maturity. Furthermore, in ripe grains the starch itself is less di- gestible by amylase than in unripe ones. The activity of lipase in oleiferous plants is less affected by the conditions of ripening, but that of protease varies inversely with the degree of maturity, parallel to the amylase and catalase. K. V. THIMANN</p>																																																			
<p>ASB.SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

1ST AND 2ND CODES																										3RD AND 4TH CODES																									
PROCESS AND PROPERTIES INDEX																																																			
<div style="display: flex; justify-content: space-between;"> ca 12 </div> <p>Varietal peculiarities of the proteins of wheat flour. M. I. Likhovitch and K. N. Klyachina. <i>Bull. Applied Botany, Genetics, Plant Breeding</i> (U. S. S. R.) Ser. 3, No. 3, 105-118 (in English 110) (1934).—No correlation was found between the various proteins in the flour and its baking qualities. Fluctuations in protein content of wheat were found to be more apparent in relation to the geographic station than to the variety. It was found that the amt of gliadin and glutenin is an index characteristic of groups of varieties and of individual varieties. The distribution of proteins is characterized by the ratio of gliadin and glutenin. For durum it was found to be 0.705, for soft spring wheat 0.746, and for flour of winter wheat 1.111. J. S. Joffe</p>																																																			
ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION																																																			
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1ST AND 2ND CODES																										3RD AND 4TH CODES																									

1ST AND 2ND COPIES		PROCESSING AND PROPERTIES INDEX		3RD AND 4TH COPIES	
13C		B-II-7			
<p>Comparison of the 100% phosphoric acid, 10A, 10B, 10C, and 10D, 10E, 10F, 10G, 10H, 10I, 10J, 10K, 10L, 10M, 10N, 10O, 10P, 10Q, 10R, 10S, 10T, 10U, 10V, 10W, 10X, 10Y, 10Z, 10AA, 10AB, 10AC, 10AD, 10AE, 10AF, 10AG, 10AH, 10AI, 10AJ, 10AK, 10AL, 10AM, 10AN, 10AO, 10AP, 10AQ, 10AR, 10AS, 10AT, 10AU, 10AV, 10AW, 10AX, 10AY, 10AZ, 10BA, 10BB, 10BC, 10BD, 10BE, 10BF, 10BG, 10BH, 10BI, 10BJ, 10BK, 10BL, 10BM, 10BN, 10BO, 10BP, 10BQ, 10BR, 10BS, 10BT, 10BU, 10BV, 10BW, 10BX, 10BY, 10BZ, 10CA, 10CB, 10CC, 10CD, 10CE, 10CF, 10CG, 10CH, 10CI, 10CJ, 10CK, 10CL, 10CM, 10CN, 10CO, 10CP, 10CQ, 10CR, 10CS, 10CT, 10CU, 10CV, 10CW, 10CX, 10CY, 10CZ, 10DA, 10DB, 10DC, 10DD, 10DE, 10DF, 10DG, 10DH, 10DI, 10DJ, 10DK, 10DL, 10DM, 10DN, 10DO, 10DP, 10DQ, 10DR, 10DS, 10DT, 10DU, 10DV, 10DW, 10DX, 10DY, 10DZ, 10EA, 10EB, 10EC, 10ED, 10EE, 10EF, 10EG, 10EH, 10EI, 10EJ, 10EK, 10EL, 10EM, 10EN, 10EO, 10EP, 10EQ, 10ER, 10ES, 10ET, 10EU, 10EV, 10EW, 10EX, 10EY, 10EZ, 10FA, 10FB, 10FC, 10FD, 10FE, 10FF, 10FG, 10FH, 10FI, 10FJ, 10FK, 10FL, 10FM, 10FN, 10FO, 10FP, 10FQ, 10FR, 10FS, 10FT, 10FU, 10FV, 10FW, 10FX, 10FY, 10FZ, 10GA, 10GB, 10GC, 10GD, 10GE, 10GF, 10GG, 10GH, 10GI, 10GJ, 10GK, 10GL, 10GM, 10GN, 10GO, 10GP, 10GQ, 10GR, 10GS, 10GT, 10GU, 10GV, 10GW, 10GX, 10GY, 10GZ, 10HA, 10HB, 10HC, 10HD, 10HE, 10HF, 10HG, 10HH, 10HI, 10HJ, 10HK, 10HL, 10HM, 10HN, 10HO, 10HP, 10HQ, 10HR, 10HS, 10HT, 10HU, 10HV, 10HW, 10HX, 10HY, 10HZ, 10IA, 10IB, 10IC, 10ID, 10IE, 10IF, 10IG, 10IH, 10II, 10IJ, 10IK, 10IL, 10IM, 10IN, 10IO, 10IP, 10IQ, 10IR, 10IS, 10IT, 10IU, 10IV, 10IW, 10IX, 10IY, 10IZ, 10JA, 10JB, 10JC, 10JD, 10JE, 10JF, 10JG, 10JH, 10JI, 10JJ, 10JK, 10JL, 10JM, 10JN, 10JO, 10JP, 10JQ, 10JR, 10JS, 10JT, 10JU, 10JV, 10JW, 10JX, 10JY, 10JZ, 10KA, 10KB, 10KC, 10KD, 10KE, 10KF, 10KG, 10KH, 10KI, 10KJ, 10KK, 10KL, 10KM, 10KN, 10KO, 10KP, 10KQ, 10KR, 10KS, 10KT, 10KU, 10KV, 10KW, 10KX, 10KY, 10KZ, 10LA, 10LB, 10LC, 10LD, 10LE, 10LF, 10LG, 10LH, 10LI, 10LJ, 10LK, 10LL, 10LM, 10LN, 10LO, 10LP, 10LQ, 10LR, 10LS, 10LT, 10LU, 10LV, 10LW, 10LX, 10LY, 10LZ, 10MA, 10MB, 10MC, 10MD, 10ME, 10MF, 10MG, 10MH, 10MI, 10MJ, 10MK, 10ML, 10MM, 10MN, 10MO, 10MP, 10MQ, 10MR, 10MS, 10MT, 10MU, 10MV, 10MW, 10MX, 10MY, 10MZ, 10NA, 10NB, 10NC, 10ND, 10NE, 10NF, 10NG, 10NH, 10NI, 10NJ, 10NK, 10NL, 10NM, 10NN, 10NO, 10NP, 10NQ, 10NR, 10NS, 10NT, 10NU, 10NV, 10NW, 10NX, 10NY, 10NZ, 10OA, 10OB, 10OC, 10OD, 10OE, 10OF, 10OG, 10OH, 10OI, 10OJ, 10OK, 10OL, 10OM, 10ON, 10OO, 10OP, 10OQ, 10OR, 10OS, 10OT, 10OU, 10OV, 10OW, 10OX, 10OY, 10OZ, 10PA, 10PB, 10PC, 10PD, 10PE, 10PF, 10PG, 10PH, 10PI, 10PJ, 10PK, 10PL, 10PM, 10PN, 10PO, 10PP, 10PQ, 10PR, 10PS, 10PT, 10PU, 10PV, 10PW, 10PX, 10PY, 10PZ, 10QA, 10QB, 10QC, 10QD, 10QE, 10QF, 10QG, 10QH, 10QI, 10QJ, 10QK, 10QL, 10QM, 10QN, 10QO, 10QP, 10QQ, 10QR, 10QS, 10QT, 10QU, 10QV, 10QW, 10QX, 10QY, 10QZ, 10RA, 10RB, 10RC, 10RD, 10RE, 10RF, 10RG, 10RH, 10RI, 10RJ, 10RK, 10RL, 10RM, 10RN, 10RO, 10RP, 10RQ, 10RR, 10RS, 10RT, 10RU, 10RV, 10RW, 10RX, 10RY, 10RZ, 10SA, 10SB, 10SC, 10SD, 10SE, 10SF, 10SG, 10SH, 10SI, 10SJ, 10SK, 10SL, 10SM, 10SN, 10SO, 10SP, 10SQ, 10SR, 10SS, 10ST, 10SU, 10SV, 10SW, 10SX, 10SY, 10SZ, 10TA, 10TB, 10TC, 10TD, 10TE, 10TF, 10TG, 10TH, 10TI, 10TJ, 10TK, 10TL, 10TM, 10TN, 10TO, 10TP, 10TQ, 10TR, 10TS, 10TT, 10TU, 10TV, 10TW, 10TX, 10TY, 10TZ, 10UA, 10UB, 10UC, 10UD, 10UE, 10UF, 10UG, 10UH, 10UI, 10UJ, 10UK, 10UL, 10UM, 10UN, 10UO, 10UP, 10UQ, 10UR, 10US, 10UT, 10UU, 10UV, 10UW, 10UX, 10UY, 10UZ, 10VA, 10VB, 10VC, 10VD, 10VE, 10VF, 10VG, 10VH, 10VI, 10VJ, 10VK, 10VL, 10VM, 10VN, 10VO, 10VP, 10VQ, 10VR, 10VS, 10VT, 10VU, 10VV, 10VW, 10VX, 10VY, 10VZ, 10WA, 10WB, 10WC, 10WD, 10WE, 10WF, 10WG, 10WH, 10WI, 10WJ, 10WK, 10WL, 10WM, 10WN, 10WO, 10WP, 10WQ, 10WR, 10WS, 10WT, 10WU, 10WV, 10WW, 10WX, 10WY, 10WZ, 10XA, 10XB, 10XC, 10XD, 10XE, 10XF, 10XG, 10XH, 10XI, 10XJ, 10XK, 10XL, 10XM, 10XN, 10XO, 10XP, 10XQ, 10XR, 10XS, 10XT, 10XU, 10XV, 10XW, 10XX, 10XY, 10XZ, 10YA, 10YB, 10YC, 10YD, 10YE, 10YF, 10YG, 10YH, 10YI, 10YJ, 10YK, 10YL, 10YM, 10YN, 10YO, 10YP, 10YQ, 10YR, 10YS, 10YT, 10YU, 10YV, 10YW, 10YX, 10YY, 10YZ, 10ZA, 10ZB, 10ZC, 10ZD, 10ZE, 10ZF, 10ZG, 10ZH, 10ZI, 10ZJ, 10ZK, 10ZL, 10ZM, 10ZN, 10ZO, 10ZP, 10ZQ, 10ZR, 10ZS, 10ZT, 10ZU, 10ZV, 10ZW, 10ZX, 10ZY, 10ZZ, 10AA, 10AB, 10AC, 10AD, 10AE, 10AF, 10AG, 10AH, 10AI, 10AJ, 10AK, 10AL, 10AM, 10AN, 10AO, 10AP, 10AQ, 10AR, 10AS, 10AT, 10AU, 10AV, 10AW, 10AX, 10AY, 10AZ, 10BA, 10BB, 10BC, 10BD, 10BE, 10BF, 10BG, 10BH, 10BI, 10BJ, 10BK, 10BL, 10BM, 10BN, 10BO, 10BP, 10BQ, 10BR, 10BS, 10BT, 10BU, 10BV, 10BW, 10BX, 10BY, 10B</p>					

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Phosphorus-containing compounds in cottonseed. M. L. Likhnerich. *Mosk. Gos. Univ. Izv.* 13, No. 4, 20-2 (1957). Preliminary tests in extn. with alc. and Et_2O of 6 grades of cottonseed from Central Asia and Caucasus showed the presence of 1.84-2.28% P_2O_5 in the kernel. About 75% of the P is present as phytin, 5.0% as phos. phatides and the balance consists of phosphoproteins and insol. fraction. The hulls contain 0.04-0.08% P_2O_5 , 30% of which is inorg. P and no phytin. C. H.

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

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<p>Phosphorous substances in some oil seeds. M. I. Likhkevich. <i>Moskovskoe Zhurno Delo</i> 13, No. 6, 9-10 (1937); cf. <i>U. S. A. 32, 820</i>. Vacuum-dried seed meals were extd. successively with K_2O, alc. alk., CaH_2 and 2% HCl. P was detd. in all the extns. and phytin in the HCl extn. by the Gebner and Stadler method. The contents of total P_2O_5 and phosphatides decrease in the order given: cottonseed, soybean, sunflower seed, flaxseed, castorbean and peanut. The computed lecithin content is considerably lower (up to 10 times) than that of phosphatides sol. in alc. and CaH_2. Cottonseeds contain max. lecithin. Of the P contents in the oil seeds 52-76% is combined as phytin, 1.4-8.3% as phosphatides and the balance is contained in phosphoproteins in the HCl extn. and in the insol. matter. Cottonseeds and sunflower seeds are the richest in phytin P. Chav. Blanc</p>																																																																																																																																																											
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<p>Localization of some chemical constituents in the vegetable oil. A. M. Goklovskii and M. I. Lishkevich. <i>Doklady Akad. Nauk SSSR</i> 1934, 18(1934). The oil from the whole kernels of cotton, sunflower and peanut seeds was removed with a hydraulic press, and analyzed for phosphatides, sterols and unsaponifiable lipides. Less than 10% of the phosphatides in the seed is found in the oily fraction. Sterols are distributed equally between the oily fraction and the residue (gel phase). Most of the unsaponifiable lipides found in the oil.</p> <p>H. Cohen</p>			
<p>ASA-ILA METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>RECORDS #1</p>		<p>RECORDS #2</p>	
<p>RECORDS #3</p>		<p>RECORDS #4</p>	
<p>RECORDS #5</p>		<p>RECORDS #6</p>	
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<p>RECORDS #9</p>		<p>RECORDS #10</p>	
<p>RECORDS #11</p>		<p>RECORDS #12</p>	
<p>RECORDS #13</p>		<p>RECORDS #14</p>	
<p>RECORDS #15</p>		<p>RECORDS #16</p>	
<p>RECORDS #17</p>		<p>RECORDS #18</p>	
<p>RECORDS #19</p>		<p>RECORDS #20</p>	
<p>RECORDS #21</p>		<p>RECORDS #22</p>	
<p>RECORDS #23</p>		<p>RECORDS #24</p>	
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<p>RECORDS #99</p>		<p>RECORDS #100</p>	

1ST AND 2ND CROSS		PROCESSING AND PROPERTIES INDEX		3RD AND 4TH CROSS	
CA		<p>Storing of phosphorus-containing substances in cotton seeds during their ripening. M. I. Lishkevich, <i>Izvestiya VNIIZH</i> (Vsesoyuz. Tsentral. Nauch.-Issledovatel. Inst. Zhiror. "VNIIZH") 1939, 106-10; <i>Chem. Zentr.</i> 1940, II, 1228. Cotton seeds, 25-70 days old, were investigated. During this period of growth the P_2O_5 content decreased from 3.41 to 2.30% of the abs. wt. of the kernel. The phytin P fell from 1.47 to 1.37 and subsequently rose to 1.57%. The lecithin P increased from 0.08 to 1.63%. For the same period the total P_2O_5 in 1000 dry kernels increased from 0.44 to 1.15 g. Of this the P_2O_5 in phytin was 0.187 and 0.783 g., resp., in lecithin 0.12 and 0.70 g., resp. The P_2O_5 in proteins as obtained by difference was 0.22 and 0.30, resp. No inorg. P was found; it disappeared during the ripening period. Cf. C. A. 33, 9682.</p> <p>M. Huseh</p>		11D	
ASB-11A METALLURGICAL LITERATURE CLASSIFICATION					
FROM SYMBOLS		FROM SYMBOLS		FROM SYMBOLS	
SYMBOLS		SYMBOLS		SYMBOLS	

100 AND 4TH CODES
 27
 PROCESSES AND PROPERTIES INDEX
 Behavior of phosphorus compounds and unsaponifiable substances of cottonseed during extraction and pressing
 A. M. Gakhovskii and M. I. Lishevskii. *Trudy VNIIZH* (Vsesoyuz. Tsentr. Nauch.-Issledovatel. Inst. Zhiruv "VNIIZH") 1939, 118-25; *Chem. Zvezd.* 1940, 11, 1228 U.
 Phosphatides are mainly found in the gel phase and only a fraction of them is found in the oil phase. The unsaponifiable substances of a lipoid character are found preponderantly in the oil phase and only a little of it is in the gel phase. In oil obtained by pressing, the phosphatides amounted to 1.48-1.82% of the wt. of oil, and the unsaponifiable substances to 0.77-1.04%. In oil obtained by extr., the phosphatides amounted to 1.48-1.70% and the unsaponifiable substances to 1.38-1.74%. Upon purification of the oil with alkalis the phosphatides disappeared entirely. The unsaponifiable substances decreased from 0.91-1.04% in the unpurified oil to 0.01-0.07% in the purified. M. Houch

13C

13-11-7

Continued from page 12. The material contains 1.7% of phosphorus, of which 16.5% are not in COM, 78.5% in EOH, and 7% in G. The fractions contain, respectively, 46.1, 53.2-53.4, and 100% of isobutyl, 53.2, 46.4-46.8, and 0% of isobutyl.

R.T.

13-11-7

LISHKEVICH, M. I.

Chem Abs

v. 48 25 Jan 54

Botany

✓ The effect of moisture content of sunflower seeds on their keeping. M. I. Lishkevich. *Maslobojno-Zhirovaya Prom.* 18, No. 5, 1-3 (1953). The data are presented to show that respiration rate of sunflower seeds (I) (also of soybean, cottonseed, and flaxseed) is very low around the critical 16% moisture content of the hydrophilic part (II) of I. I contg. 38-40% oil on the basis of dry matter have shown the most intense respiration at 20.8-20.1% moisture level for II. The heat generated in the process was sufficient to raise the temp. perceptibly throughout the body of I and cause its spoilage. The accumulation of free fatty acids in I was also observed. Reduction in the moisture content of II to a crit. level of 16% by drying I before storage is recommended. Vladimir N. Krukovsky

All-Union Sci Res inst Fats

~~GIL'DSHTAYN, N.N.~~
~~LISHKEVICH, M.I.~~

GIL'DSHTAYN, N.N., agronom; LISHKEVICH, M.I., kandidat biologicheskikh nauk.

Problem of working out a standard for sunflower seed. Masl.-zhir.
prom. 20 no.1: 6-8 '55. (MLRA 8:3)

1. Glavrazshirmaslo (for Gil'dshteyn). 2.VNIIZh (for Lishkevich)
(Sunflower seed)

Lishkevich, M. I.

LISHKEVICH, M.I., kand. biol. nauk; REPINA, G.S.

~~Chemical composition of sunflower seed hulls.~~ Masl.-zhir. prom. 23
no.8:9-12 '57. (MIRA 10:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov.
(Sunflower seed)

1. LISHKEVICH, V.I., Eng.
2. USSR (600)
4. Excavation
7. Excavator operator G.V. Vlasov, Gor. khoz. mosk., 26, No.11, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified

LISHKEVICH, V.I.

Earthwork technique and the laying of foundations in residential
building construction. Mekh.trud.rab.8 no.1:26-30 Ja-F '54.
(MLRA 7:2)

1. Glavnyy inzhener Mosfundamentstroya.

(Foundations)

POLYAKOVA, N.M.; LISHKO, V.K.

Fractionation of soluble brain proteins. Ukr.biokhim.zhur. 34
no.1:10-22 '62. (MIRA 17:5)

1. Institute of Biochemistry of the Academy of Sciences of the
Ukrainian S.S.R., Kiyev.

POLYAKOVA, N.M.; LISHKO, V.K.

Isolation and purification of brain proteinase. Ukr. biokhim.
zhur. 34 no.2:208-216 '62 (MIRA 16:11)

1. Institute of Biochemistry of the Academy of Sciences of
the Ukrainian S.S.R., Kiev.

*

LISHKO, V.K.

Study of the properties of brain cathepsin. Ukr. biokh. zhur. 35 no.6:874-880 '63. (MIRA 18:7)

1. Institut biokhimii AN UkrSSR, Kiyev.

LISHKO, V.K.

Purification and some properties of brain cathepsin. Ukr.
biokhim. zhur. 36 no. 4:565-573 '64. (MIRA 18:12)

1. Institut biokhimii AN UkrSSR, Kiyev. Submitted May 8, 1964.

LISHKO, V.K.

Study of the specificity of cathepsin in the bovine brain.
Ukr. biokhim. zhur. 37 no.2:163-168 '65.

(MIRA 18:6)

1. Institut biokhimii AN UkrSSR, Kiev.

STETSENKO, A.V.; LISHKO, V.K.

Imidocyanines containing electronegative substitutes. Ukr.khim.
zhur. 28 no.2:218-222 '62. (MIRA 15:3)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.
(Cyanines)

LAGATSKIY, A.P.; LISHNEVETS, Z.I., agronom

Our practices in the use of composts. Zemledelie 27 no.1:
58-61 Ja '65. (MIRA 18:3)

1. Predsedatel' kolchoza "Novyy byt", Minskoy oblasti (for
Lagatskiy). 2. Kolchoz "Novyy byt", Minskoy oblasti (for
Lishnevets).

LISHNEVSKAYA, L.A.

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Reaction of ureo compounds with nitramic acid and its derivatives. 1. Reaction of diazo compounds with *N*-methylsulfamid acid. D. Z. Zavel'ski and L. A. Lishnevskaya. *Sovetskii Sovet Otschet Khim., Akad. Nauk SSSR*, 1, 434-45 (1953). — Under proper conditions *N*-methylsulfamid acid reacts with diazo compounds to yield salts of $\text{ArN}:\text{N}(\text{Me})\text{SO}_2\text{H}$. To 61.5% pure H_2SO_4 was added 30 g. dry CONH_2 while keeping the temp. below 60° and the soln. was poured into a large porcelain vessel and heated to 140-50°. A gas evolution gave a spongy mass. This, treated with 42-3 g. KOH in 250 ml. H_2O and heated on a steam bath, yielded a soln. of $(\text{KO})_2\text{S}_2\text{N}_2$; the hot soln. was treated with C, filtered, and cooled, then neutralized with acid (unspecified) yielding 72% relatively poorly sol. neutral $\text{H}_2\text{N}(\text{SO}_3\text{K})_2$. This (75 g.) in 300 ml. N_2O was treated with 37.5 g. MeSO_3H and stirred 1.5-2 hrs. yielding a ppt. of 77% $\text{MeN}(\text{SO}_3\text{K})_2$ (lit. (for analysis, the sample of this is refluxed several min. in H_2O with 1-3 ml. HCl and the resulting MeNHSO_3H is titrated with NaNO_2). In a strongly acid soln. using starch-KI paper indicator), in 240 ml. H_2O slightly acidified with H_2SO_4 was boiled removed with CO_2 , the mixt. filtered and evaporated in vacuo. The yield of the former was 23.7 g.; 54% by I_2/CO_2 . To 80 ml. acetate buffer pH 0.0 was added 5.1 g. I_2 (acid. purity 87.6%), and at 15-20° the mixt. was treated with acid soln. of $\text{p-ON}(\text{C}_6\text{H}_4\text{N}_2\text{Cl})$ (from 0.03 mole aniline, 0.03 mole HCl , and 0.0318 mole NaNO_2) (pH should remain 6.0; controlled by KOAc or $\text{F}(\text{HCO}_2)_2$ addn.) yielding of the $\text{p-ON}(\text{C}_6\text{H}_4\text{N}_2\text{Cl})\text{MeN}(\text{SO}_3\text{K})_2$ (VI), yellow ppt.; after 6 hrs.

stirring the reaction was complete (break test with 8.76 g. II was filtered off, washed with a 10% H₂O and dried below 50°; it was recryst. from 15 parts H₂O at 80-90°. II was sol. in H₂O yielding a yellow soln. at room temp. is 13 g./l. at 100° about 100 g./l. at decomp. in hot acid solns. with evolution of N (90% total N content; this can be used for gasometric or gravimetric analysis). Cleavage begins below room temp. at pH 3, becoming fairly rapid at pH 2.5; on heating the reaction is quite apparent at pH 1.8-2.0. The cleavage yields *p*-O₂NC₆H₄N₃ ion, which completely decomposes to *p*-O₂NC₆H₄N₃ ion, which completely decomposes to follow the extent of the decomp.; this may be used to follow the extent of the decomp.; the substance also contains MeNHCO₂H. Similar treatment of *m*-O₂NC₆H₄N₃Cl gave a 74.3% yield of *m*-O₂NC₆H₄N₃Cl. *p*-O₂NC₆H₄N₃Cl (from warm H₂O), yellow plates, generally similar to II but somewhat more stable on heating; it does not give the product decomp. with a flash; it dissolves in warm HCl yielding a pink soln. without gas evolution and slowly decays to a strongly acid. The substance begins to decomp. into the 2' component at pH 4-5.6; in warm 50-60% H₂SO₄ the cleavage is rapid. Similarly, at pH 5, was prep. *p*-O₂NC₆H₄N₃Cl. 70%, orange crystals, soly. similar to the above isomers. Its cleavage is moderately rapid in aq. soln. at pH 3.5; in concd. HCl the product gives a red soln. with gas evolution; this product can not be stored over 2-3 weeks in dry state; in contrast to the *m*- and *p*-isomers which can be stored indefinitely. Similarly were prep. 2,4-C₆H₃(N₃)₂MeSO₃K, cream-colored crystals, 88.7% 2,4-C₆H₃(N₃)₂MeSO₃K, yellowish solid (from H₂O

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with a little NH_4OH ; the latter with aq. $\text{Ph}_3\text{NH}_2\text{HCl}$ yields the phenylammonium salt, light yellowish solid, sparingly sol. in H_2O , sol. in EtOH . The general properties of these are similar to the other derivs. described above. II. Properties of 1-aryl-3-methyl-3-triazene-sulfonic acids. *lit.* 446-53.—Salts of 1-aryl-3-methyl-3-triazene-sulfonic acid, $\text{ArN}:\text{NNMeSO}_3\text{H}$, are cleaved in aq. solns. in the presence of acids yielding the MeNHSO_3H and the ArN_2 loss. The decomn. becomes slower as the aryl substituents become more neg. The cleavage can be used as a method of analysis for these salts. Two procedures are

discussed: (a) The sample is kept 1.5-2 hrs. in dil. HCl , then titrated with $2\text{-C}_6\text{H}_5\text{ONa}$ soln. (from $2\text{-C}_6\text{H}_5\text{OH}$ and in $0.05\text{-}0.1\text{N}$ NaOH). (b) MeNHSO_3H is detd. by titration with NaNO_2 in acid medium; the detn. is rapidly run by dissolving the sample in $5\text{-}15\%$ HCl , and titrating at room temp. Method (b) is generally more reliable. G. M. Kosolapoff

LISHNEVSKAYA, L. A.

Reaction of diazo compounds with sulfamic acid and its derivatives. III. The reaction of hydrolytic decomposition of 1-aryl-3-methyl-3-triazene-sulfonic acids. D. Z. Zavel'skii and L. A. Lishnevskaya. *Zhur. Obshchei Khim.* 25, 562-71; *J. Gen. Chem.* 6:15.R. 25, 343-50 (1955) (Engl. translation); cf. *C.A.* 49, 905b. Salts of the type $\text{Ar.N.N.MeSO}_3\text{K}$ (I) lose the sulfo group with relative ease, the lability increasing with increasing electrophilic character of the substituents in Ar. Such hydrolytic cleavage yields arylmethyltriazenes which are unstable in acid and yield N, MeOH, and ArNH_2 . If the Ar group contains moderately electrophilic groups there also occurs, along with the above cleavage, a cleavage to the diazo compd. and MeNHSO_3H , which yields sym. diaryltriazenes. The intermediate methyltriazenes also can cleave into N and ArNMeH , this direction being favored by the least amt. of H_2O . I with 3-O₂N, 4-O₂N, or 2,5-Cl₂ substituents are stable even for 0.5 hr. at pH 1-5 at room temp. At 50-55° at pH 3, the nitro derivs. give in 5 min. enough SO_3 ion to be detectable, while the 2,5-Cl₂ deriv. does this even at pH 3.5-4.0; 2-O₂N or 2,4-Cl(O₂N) deriv. show cleavage even in neutral soln. on heating. Pure I with 4- or 3-O₂N substituents can be dried safely at 60-70° and stored indefinitely if dry.

Others must be dried very carefully. Recrystn. of these substances must be performed rapidly and some NH_4OH in the H_2O used for soln. is necessary for stabilization of the substances. Heating I (Ar = 4-O₂NC₆H₄) in acetate buffer (pH 4) 4 hrs. at 60-70° gave much N, p-4-O₂NC₆H₄-N:NNH(C₆H₄)NO₂, m. 223-30°, some unchanged I, MeOH, and SO_3 ion. The 2,5-Cl₂ and 3-O₂N derivs. behaved similarly. Refluxing I (Ar = 2-O₂NC₆H₄) in H_2O readily released SO_3 ions, MeOH, N, and 2-O₂NC₆H₄NH₂; I (Ar = 2,4-Cl(O₂N)C₆H₃) is cleaved even more rapidly and yields MeOH, SO_3 ion, N, and 2,4-Cl(O₂N)C₆H₃NH₂ (90.2% N and 82.65% SO_3 were detd. after brief heating in H_2O to 60-65°, and 65% MeOH was isolated from the soln.). If this I is allowed to stand in air until brown spots are formed on its surface (3 days), the material may contain up to 93.8% amine whose nitroso deriv., m. 94.5-5°, was identified as that of 2,4-Cl(O₂N)C₆H₃NHMe (II). If the I is heated in H_2O on a water bath, 6.63% II is detected; letting the material stand in air as described above gave 35.5% II.

G. M. Kosolapov

LISHNEVSKAYA, L. A.

LISHNEVSKAYA, L. A. : "The interaction of diazo compounds with sulfamic acid and its N-aryl substitutes." State Order of Labor Red Banner Inst of Applied Chemistry (GIPKh). Leningrad, 1956. (Dissertation for the Degree of Candidate in Chemical Science)

Source: Knizhnaya Letopis' No. 28 1956 Moscow

1-12-1957, 17.

AUTHORS: Zavel'skiy, D. Z. and Lishnevskaya, L. A. 79-2-25/58

TITLE: Reaction of Diazo-Compounds with Sulfamic Acid and its Derivatives.
Part 4. Diazonium Salts of Methylaryltriazene-N-Sulfonic Acids
(Vzaimodeystviye diazosoedineniy s sul'faminovoy kislotoy i yeye
proisvodnymi. IV. O diazoniyevykh solyakh metilariltriazene-N-sul'fokislota)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp 388-398 (U.S.S.R.)

ABSTRACT: The reaction of methylsulfamic acid with nitroaryldiazo compounds in highly acid media yielded diazonium salts of aryl-1-methyl-3-triazene-sulfonic acid-3. Analysis of the diazo salts by nitrosation confirmed the chemical formula $C_{13}H_{13}O_8N_7S$ but when combined in a neutral medium with m-toluedenamine or beta-naphthol it showed that only one mole of nitrodiazobenzene, of the two moles contained in the investigated product, is included in the combination. It was established that the synthesis of the diazonium salts can also be realized by the reaction of salt exchange between the diazo chloride salts and the potassium salts of aryl-1-methyl-3-triazenesulfonic acid-3. The properties and the reactions

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79-2-25/58

Reaction of Diazo-Compounds with Sulfamic Acid and its Derivatives.
Part 4.

leading to the decomposition of the diazonium salts were investigated, It was found that the stability of the salts decreases with the increase in the electrophilic characteristics of the substitutes in the nucleus of the diazo radicals which are included in the composition of the salts.

7 tables. There are 4 references, all of which are Slavic

ASSOCIATION: State Institute of Applied Chemistry

PRESENTED BY:

SUBMITTED: February 10, 1956

AVAILABLE: Library of Congress

Card 2/2

LISHNEVSKAYA, L.A.

ZAVEL'SKIY, D.Z.; LISHNEVSKAYA, L.A.

Reaction of diazo compounds with sulfamic acid and with its derivatives. Part 5: Reactions of diazo compounds with N-phenyl-sulfamic acid. Zhur.ob.khim. 27 no.5:1330-1339 My '57.

(MLRA 10:8)

1. Gosudarstvennyy institut prikladnoy khimii.
(Diazo compounds) (Sulfamic acid)

LISHNEVSKAYA, L.A.
ZAVEL'SKIY, D.Z.

Reaction of diazo compounds with sulfamic acid and with its derivatives. Part 6: Indicator properties of 4-aminoazobenzene-N-sulfonates. Zhur.ob.khim. 27 no.5:1339-1345 My '57. (MLRA 10:8)
(Aniline) (Diazo compounds) (Sulfamic acid)

AUTHORS: Zavel'skiy, D. Z., Lishnevskaya, L. A. 79-28-3-42/61

TITLE: The Reaction of Diazo-Compounds With Sulfamic Acid and Its Derivatives (Vzaimodeystviye diazosoedineniy s sul'faminovoy kislotoy i yeye proizvodnymi). VII. On the Reactions of the Diazo-Compounds With Unsaturated Sulfamic Acid (VII. O reaktsiyakh diazosoedineniy s nezameshchennoy sul'faminovoy kislotoy)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 745-755 (USSR)

ABSTRACT: The authors suggested and discussed the reaction mechanism between diazo-compounds and unsaturated sulfamic acid. This mechanism presupposes the initial formation of aryltriazeno-N-sulfo acid which tautomerically converts to the unstable form which again is split up separating arylamine, nitrogen and sulfuric acid. The suggested mechanism was supported by the synthesis of the 1-anthraquinonyltriazene-3-sulfonate by condensation of the 1-diazoanthraquinone with sulfamic acid as well as by the capability of this triazene easily to decompose forming 1-aminoanthraquinone, nitrogen and sulfuric

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The Reaction of Diazo-Compounds With Sulfamic Acid and Its Derivatives. VII. On the Reactions of the Diazo-Compounds With Unsaturated Sulfamic Acid 79-28-3-42/61

acid. It is assumed that the stability of the 1-anthraquinonyltriazene-N-sulfonate compared with its analogs, depends on the fact that the movable hydrogen of the triazene group is situated at the nitrogen which is neighbouring the anthraquinonyl radical and forms the hydrogen bond with the carbonyl of anthraquinone. The position of the movable hydrogen, neighbouring anthraquinonyl, is proved by the decomposition of the 1-anthraquinonyltriazene-3-sulfonate while forming aminoanthraquinone, nitrogen and sulfuric acid, as well as by the formation of the 1-methylaminoanthraquinone in the course of decomposition in the methylation of this triazene. It was found that the 1-anthraquinonyltriazene-3-sulfonate easily splits up into 1-anthraquinonylacid and sulfuric acid under the action of an alkali. The authors suggested an interpretation of this reaction in the form of a nucleophilic substitution by the action of the hydroxyl ion. It was found that the 1-anthraquinonyltriazene-3 sodiumsulfonate exists in a yellow and in a red color, the former being the more resistive. There are 13 references, 4 of which are Soviet.

Card 2/3

AUTHORS: Zavel'skiy, D. Z., Lishnevskaya, L. A. 79-28-3-43/61

TITLE: The Reaction of Diazo Compounds With Sulfamic Acid and Its Derivatives (Vzaimodeystviye diazosoedineniy s sul'faminovoy kislotoy i yeye proizvodnymi). VIII. On the Diazo Salts of Arylsulfamic Acids (VIII. O diazoniyevykh solyakh arilsul'faminovykh kislot)

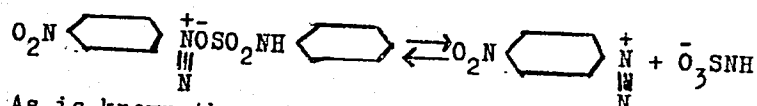
PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 755-767 (USSR)

ABSTRACT: This work is based on a previous publication (reference 1). These diazo compounds form with phenylsulfamic acid diazo salts which are easily precipitated from water, easily to be obtained in a crystalline form and which are deeply colored; this salt is similar with respect to its properties to the 4-nitrophenyldiazo salt described in reference 1. It is of interest that the saturated solutions of all these deeply colored salts are also of such deep color but that they become slightly yellow on dilution. From this can be concluded that these colored diazophenylsulfamates decompose again into colorless ions in the dissociation in water:

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The Reaction of Diazo Compounds With Sulfamic Acid and Its Derivatives. VIII. On the Diazo Salts of Arylsulfamic Acids

79-28 3-43/61



As is known the sulfates and arylsulfonates of such diazo compounds are colorless or slightly yellow in solid state. Therefore the properties of the phenylsulfaminates seemed to be very strange and they caused the authors to carry out the syntheses of some salts of diazo compounds of the benzene series and of two arylsulfamic acids in order to explain how their color depends on their character as well as on the amount of the substituents in both benzene nuclei. Thus the arylsulfamic acids form deeply colored salts of all shades with the aryldiazo compounds having electron-accepting substituents. It was shown that the more electrically negative the substituents in the aryldiazo cation the deeper is the color of the arylsulfamine salt formed by it. The same way the nucleophilic substituents in arylsulfamic acid are acting. In water the diazosulfaminates form much deeper colored saturated solutions than the solid salts which decolor in dissolution and therefore do not obey Lambert's theorem. The cause of the color of the diazoaryl sulfaminates is the formation

Card 2/3

The Reaction of Diazo Compounds With Sulfamic Acid and Its
Derivatives. VIII. On the Diazo Salts of Arylsulfamic Acids

79-28 3-43/61

of undissociated salts by the components. The decolori-
zation of their aqueous solutions is effected by the dissoci-
ation into colorless cations and anions in dilution. There
are 6 figures, 3 tables, and 2 references which are
Soviet.

SUBMITTED: March 30, 1957

ATAT: [illegible]

Card 3/3

AUTHORS: Zavel'skiy, D. Z., Lishnevskaya, L. A. 79-28-4-36/60

TITLE: Interaction Between Diazo Compounds and Sulfamic Acid and Its Derivatives (Vzaimodeystviye diazosoedineniy s sul'faminovoy kislotoy i yeye proizvodnymi). IX. On the Cause for the Color of the Diazonium Salts of Aryl Sulfamic Acids (IX. O prichinakh tsvetnosti diazoniyevykh soley arisul'faminovykh kislots)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 4, pp. 1010-1019 (USSR)

ABSTRACT: The peculiar properties of the diazonium aryl sulfominates compared with most of the other diazonium salts, made the authors explain the question. What the structural causes in aryl sulfamic acid and especially in phenyl sulfamic acid for the intensive color of the diazonium salts are. A series of control experiments had shown that the diazo compounds of the benzene series in an interaction with non substituted sulfamic acid in an acid medium give colorless solutions. Solid salts cannot be separated out. Summary: The interaction between the diazo compounds in an acid

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Interaction Between Diazo Compounds and Sulfamic Acid 79-28-4-36/60
and Its Derivatives : On the Cause for the Color of the Diazonium Salts
of Aryl Sulfamic Acids

medium and sulfamic, benzyl sulfamic, and N-ethylphenyl-sulfamic acids was investigated. Diazonium salts with enumerated sulfamic acids were obtained. 2.) It was shown that the diazonium salts of the sulfamic acid and its alkyl and aralkyl substituents are colorless or only weakly colored. The intensive color is a property of only the diazonium aryl sulfonates. 3.) It has been found that the color of the diazonium aryl sulfonates is independent of the intermolecular interactions. It also depends only to a low degree on the hydrogen binding which is possible between the most outside nitrogen of the diazonium cation and the hydrogen in the imino group. 4.) The hypothesis was set up that the cause for the color of the diazonium sulfonates can be a salt compound of special kind, which has the ability to conduct the conjugation effect between the electron accepting diazonium cation and the electron donating aryl sulfonate anion. There are 12 references, 9 of which are Soviet.

SUBMITTED: April 6, 1957

Card 2/2

AUTHORS: Zavel'skiy, D. Z., Lishnevskaya, L. A. SOV/79-28-7-44/64

TITLE: The Reaction of the Diazo Compounds With Sulfamic Acid and Its Derivatives (Vzaimodeystviye diazosoedineniy s sul'faminovoy kislotoy i yeye proizvodnymi) X. On the Colored Salts of Acylaminoarylsulfo Acids and Diazonium Bases (X.O tsvetnykh solyakh atsilaminoarilsul'fokislot s diazoniyeveryimi osnovaniyami)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 7, pp. 1925 - 1930 (USSR)

ABSTRACT: In papers it is pointed out that (Ref 3) Schröter (Shreter) synthesized deeply colored and stable products in the reaction of diazonium salts with acylaminoarylsulfo acids. The properties of these compounds seemed to the authors, according to their description, to be similar to those arylsulfamates of diazonium compounds investigated by themselves; hence they repeated the work of Schroeter, using the benzenesulfonylsulfanilic acid which is closest to the arylsulfamic acids as regards its structure; this was done for the purpose of comparing the structure and properties with the arylsulfamates of the diazonium compounds. It was found that the colored reaction products

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The Reaction of the Diazo Compounds With Sulfamic Acid and Its Derivatives. X. On the Colored Salts of Acylaminoarylsulfo Acids and Diazonium Bases

SOV/79-28-7-44/64

the diazonium compounds with acylaminoarylsulfo acids obtained by Schroeter were real diazonium salts. The acylaminoarylsulfonates of the diazonium compounds are the deeper colored the more electrophilic the substituents in the diazonium aryl ring are, and the smaller the acid character at the acyl is, and the more condensed benzene nuclei are contained in the aryl of the acylaminoarylsulfo acid. The table shows the dependence of the color of the diazonium salt of the anion of the arylsulfamino acid or acylaminoarylsulfo acid entering it. There are 3 figures, 1 table, and 8 references, 6 of which are Soviet.

SUBMITTED:

April 6, 1957

1. Nitrogen compounds (Organic--Chemical reactions 2. Sulfamic acid esters--Chemical reactions 3. Dyes--Color

Card 2/2

ZAVEL'SKIY, D.Z.; LISHNEVSKAYA, L.A.

Interactions of diazo compounds with sulfamic acid and its derivatives. Part 11: Reasons for coloration of various diazo and heterocyclic amino salts. Zhur.ob.khim. 28 no.9:2560-2567 S '58.
(MIRA 11:11)

(Diazo compounds) (Amino compounds) (Coloring matter)

ZAVAT'SKIY, D.Z.; LISHNEVSKAYA, L.A.

Interactions of diazo compounds with sulfamic acid and its derivatives. Part 12: Diaryltriazene-N-sulfonic acids and their diazonium salts. Zhur.ob.khim. 28 no.9:2568-2577 S '58.
(MIRA 11:11)

(Triazene) (Diazo compounds)

LISHNEVSKAYA, Ye.B.

Possible role of ribonucleic acid in the mechanism of resistance to tuberculosis. Biul. eksp. biol. i med. 52 no.9:63-65 S '61.
(MIRA 15:6)

1. Iz laboratorii biokhimi (zav. - kand.biolog.nauk A.M. Vitrinskaya) Leningradskogo nauchno-issledovatel'skogo instituta tuberkuleza (direktor - prof. A.D. Semenov). Predstavlena akademikom V.N. Chernigovskim.
(NUCLEIC ACID) (BCG VACCINATION)

LISHNEVSKAYA, Ye.B.

Possible role of ribonucleic acid in the mechanism of antituberculosis resistance. Report No.2: Ribonucleic acid and ribonuclease activity in the organs of mice infected with tuberculosis and immunized with BCG vaccine. Biul. eksp. biol. i med. 52 no.11:88-91 N '61. (MIRA 15:3)

1. Iz laboratorii biokhimii (zav. kand.biologicheskikh nauk A.M. Vitrinskaya) Leningradskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - prof. A.D. Semenov). Predstavlena akademikom V.N. Chernigovskim.

(TUBERCULOSIS)
(BCG VACCINATION)

(NUCLEIC ACIDS)
(RIBONUCLEASE)

LISHNEVSKIY E.N.

307/2219

WEEK 1 BOOK EXPIRATION

3(5)

RYSER. Glavnye upravleniya geologii i okhrany nedr

Geologiya i neftegeonomet' Vostochnoy Sibiri (Geology and Oil- and Gas-bearing Possibilities of Eastern Siberia). Moscow, Gosstokhtekhnizdat, 1959. 486 p. 1,650 copies printed.

Additional Sponsoring Agency: Vostochno-Sibirskiy neftegeologicheskii trust.

Ed.: V.G. Vasil'yev; Executive Ed.: Ye.G. Zaslavskiy; Tech. Ed.: I.G. Fedotova.

PURPOSE: The book is intended for geologists interested in the stratigraphy, lithology, tectonics, and the oil- and gas-bearing possibilities of the Eastern Siberian platform and Zabaykalskye.

CONTENTS: This collection of articles contains materials on the stratigraphic classification and lithologic characterization of sediments of the Cambrian system and of the so-called "ancient" beds developed along the northern slope of the Eastern Sayan Mountains and the western littoral of Lake Baikal. Extensive information on the petrography and paleontology of these deposits is presented. A number of articles deal with the tectonics of the southern part of the Siberian platform and its oil- and gas-bearing possibilities of the Baykal-Yenisey depressions. There are 40 tables, 74 figures, and 4 charts. There are 205 Soviet references.

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Il'yukhin, A.V. Lithologic Characteristics and the Outlook for Gas- and Oil-bearing Possibilities in the Mordkaya Suite of the Lower Cambrian of the Southern Siberian Platform

Gorodkov, A.I. Facies of the Lower Cambrian Sediments in the Southern Part of the Siberian Platform

Il'yasova, Z.M. and L.A. Lysova. Spores in the Lower Cambrian Sediments of the Southern Part of the Siberian Platform

Karasev, I.P., G.G. Lebed', and V.S. Galimova. Fauna of the Lower and Middle Cambrian Period in the Southern Part of the Siberian Platform

Zaychuk, B.S., Ye.N. Per'kova, and Ye.M. Meshcherakova. Oil-accumulating Properties of the East Siberian Cambrian Sediments

Karzhakov, V.S. Cambrian Sediments of the Middle Course of the Birtusa River

Kononov, A.I. New Data on the Tectonics of the Southeastern Part of the Siberian Platform

Zamiaty, S.M. and V.Y. Sazonov. Geological Structure and the Oil- and Gas-bearing Possibilities of the Selenginskaya Depression

Prill'yev, V.O., S.M. Gumborich, and E.N. Lishnevskiy. The Problem of Interpreting Gravimetric and Geologic Data for the Southern Part of the East Siberian Platform

Paleontologic Plates

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8-20-59

VOLKHONIN, V.S.; LISNEVSKIY, E.M.

Characteristics of basic tectonic structures in the southern Soviet Far East from the geophysical viewpoint. Izv. vys. ucheb. zav.; geol. i razved. 3 no.9:3-9 S '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki.

(Soviet Far East--Geology, Structural)

VASIL'YEV, V.; LISHNEVSKIY, E. IV.

Origin of "Algarites" in the southwestern banks of Lake Baikal.
Geol. nefti i gaza 4 no. 3:58-59 Mr '60. (MIRA 13:12)
(Baikal, Lake--Petroleum geology)

VOLKHONIN, V.S.; LISHNEVSKIY, E.N.; TARKOV, A.P.; SUDAKOV, S.P.

Lower Cretaceous sediments in the southern Zeya-Bureya
downwarp in connection with oil and gas potentials. Geol.i
geofiz. no.5:9-18 '61. (MIRA 14:6)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh
metodov razvedki, Moskva.

(Zeya-Bureya Plain—Petroleum geology)

(Zeya-Bureya Plain—Gas, Natural—Geology)

LISHNEVSKIY, E.N.

Density and magnetic susceptibility of rocks of the Zeya-Bureya
Lowland. Razved.i prom.geofiz. no.45:79-91 '62. (MIRA 15:11)
(Zeya-Bureya Plain--Rocks--Magnetic properties)

LISHNEVSKIY, E.N.; STEPANOV, P.P.

Basic tectonic characteristics of the central and southern parts
of the Zeya-Bureya Plain. Geol. i geofiz. no.5:117-122 '63.

(MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh
metodov razvedki, Moskva.

(Zeya-Bureya Plain--Geology, Structural)

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Iz Rzhskogo instituta travmatologii i ortopedii (dir. - dotsent
V.K.Kalnberz [Kalnberzs, V.]) i travmatologicheskogo otdeleniya
(zav. - zasluzhenny vrach Estonskoy SSR - B. Kh. Ehiline)
Tallinskoy respublikanskoy bol'nitsy. Adres avtorov: Riga, ul.
Dantes, d.12, Institut travmatologii i ortopedii.

BIEZIN', A.P. [Biezins, A.], prof.; LISHNEVSKIY, S.M., prof.;
PETUKHOVA, L.I., doktor med.nauk; LENTSEERG, K.Ya. [Lencbergs, K.],
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Automatic control of multiple pumping stations. Vash. i neft.
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FA 15/49T84

LISHNEVSKIY, T. S.

DESH/Medicine - Surgery
Medicine - Biography

Sep 48

"In Honor of Dr Mikhail Dmitriyevich Gorbenko's
Fiftieth Year of Practice," T. S. Lishnevski, 1 p

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Describes career of Surgeon Gorbenko.

15/49T84

5(4),5(3)
AUTHORS:

Lishnevskiy, V. A., Sergeyev, G. B.

SOV/20-128-4-36/65

TITLE:

Rapid Addition of Chlorine Across a Double Bond at Low Temperatures

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 4, pp 767-768 (USSR)

ABSTRACT:

A. M. Chaykin (Ref 1) ascertained in 1955 that chlorine at low temperatures in the condensed phase is rapidly added to ethylene. The authors assumed that under these conditions the steric hindrances are reduced, and investigated this reaction in the vacuum at the temperature of liquid nitrogen on ethylene, propylene, isobutylene, cyclohexene, styrene, and thiophene. Reaction occurs immediately. Except for thiophene which supplied hardly separable mixtures, quantitative yields of dichlorosubstituted compounds were obtained (Table 1). On the basis of these results it should be possible to develop a new preparative method of synthesizing dichlorosubstituted compounds. There are 1 table and 1 Soviet reference.

Card 1/2

APPROVED FOR RELEASE: 06/20/2000

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Rapid Addition of Chlorine 'Across' a Double Bond at
Low Temperatures

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ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

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SUBMITTED: May 23, 1959

Card 2/2

GURMAN, V.S.; LISHNEVSKIY, V.A.; SERGEYEV, G.B.

Interaction between molecular and atomic chlorine, and metallic silver. Izv.vys.ucheb.zav.; khim.i khim.tekh. 3 no.1:29-32 F '60. (MIRA 13:5)

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Predstavleno akademikom N.N.Semenovym.

(Chemical reaction, Rate of)
(Low temperature research)